

What is claimed is:

1.

A method of making a composite riser for an archery bow, comprising the steps of:

- a) orienting fibers in a mold in a desired manner to ensure proper arrangement of the fibers in the riser;
- b) providing a resin onto the fibers and between adjacent fibers;
- c) maintaining the orientation of the fibers in the mold even after the mold is closed; and
- d) molding the resin and fibers under pressure; and
- e) curing the resin to form a composite riser.

2.

The method of claim 1 wherein step b) is accomplished by applying resin to individual fiber strands prior to placing the fibers into the mold.

3.

The method of claim 2 wherein the resin is applied to the fiber strands utilizing filament winding techniques to form sheets of resin impregnated fibers, and step a) is accomplished by placing sheets of resin impregnated fibers into the mold in a particular manner.

4.

The method of claim 3 wherein step c) is accomplished by the resin in the resin impregnated fiber sheets which at least substantially prevents movement of the fibers upon closing of the mold as well as during the molding step.

5.

The method of claim 3 wherein step d) is accomplished by heating the mold and applying pressure to the resin impregnated fiber sheets.

6.

The method of claim 5 wherein the mold is heated to between 100°C and 150°C and said pressure is between 30 tons and 50 tons.

7

The method of claim 3 wherein prior to placing the resin impregnated fiber sheets into the mold, they are arranged in at least one jig with the fibers of different sheets arranged at different angles to improve the structural integrity of the riser.

8.

The method of claim 3 wherein at least one of the resin impregnated fiber sheets is rolled into an elongate cylinder prior to insertion into the mold.

9.

The method of claim 1 wherein step a) is accomplished by rolling up one or more sheets of woven fibers into an elongate cylinder.

10.

The method of claim 9 wherein step c) is accomplished by closing the mold around the rolled cylinder of woven fiber sheets with the orientation of the fibers maintained by virtue of their being interwoven in the sheets.

11.

The method of claim 10 wherein step b) is accomplished by injecting resin under pressure into the closed mold.

12.

The method of claim 11 wherein step d) produces a generally rectangular blank and which also comprises the step of removing excess material from the molded blank to form the finished composite riser.

13.

The method of claim 8 wherein the cylinder is arranged for placement into the mold so that ends of the cylinder are located inboard of an outer surface of the riser.

14.

The method of claim 13 wherein the finished riser has a tension side and a compression side and the ends of the cylinder are not located along either the tension or compression sides of the riser.

15.

The method of claim 13 wherein the finished riser has a tension side and a compression side and the cylinder is positioned such that the cylinder is essentially continuous along both the tension and compression sides of the riser.

16.

The method of claim 1 wherein step a) is accomplished by arranging fibers into a truss-like structure without any fibers extending longitudinally along the riser.

17.

The method of claim 16 wherein the truss-like structure is hollow.

18.

The method of claim 16 wherein longitudinally extending fibers are disposed around the truss-like structure.

19.

A method of forming a composite riser for an archery bow, comprising the steps of:

- a) providing at least one sheet of woven fibers;
- b) rolling said at least one sheet upon itself to form a cylinder of fibers;
- c) placing the cylinder of fibers into a mold and closing the mold;
- d) injecting a resin into the mold under pressure to combine the resin with the cylinder of fibers; and
- e) curing the resin to form the composite riser.

20.

The method of claim 19 wherein at least one sheet of woven fibers is rolled into a first cylinder, and the first cylinder is incorporated into second cylinder formed by rolling together the first cylinder with another sheet of

woven fibers.

21.

The method of claim 19 wherein a first sheet is rolled into a first cylinder, a second sheet is rolled into a second cylinder and the first cylinder and second cylinder are incorporated into a third cylinder formed by rolling together the first cylinder and second cylinder with another sheet of woven fibers.

22.

The method of claim 19 wherein after molding and curing the resin and cylinder of fibers a generally rectangular blank is produced and the composite riser is finally formed by removing excess material from the blank.

23.

A method of forming a composite riser for an archery bow, comprising the steps of:

- a) applying resin to elongate fiber strands;
- b) forming sheets from the fiber strands and resin;
- c) arranging the sheets in a mold to provide a desired orientation of the fiber strands in the sheets;

d) applying pressure and heat to the mold to mold the sheets into an integral part; and

e) curing the resin to form the composite riser.

24.

The method of claim 23 wherein the resin is applied to the fiber strands utilizing filament winding techniques to form sheets of resin impregnated fibers.

25.

The method of claim 23 wherein in step d) the mold is heated to between 100°C and 150°C and said pressure is between 30 tons and 50 tons.

26.

The method of claim 23 wherein prior to placing the sheets into the mold, they are arranged in at least one jig with the fibers of different sheets arranged at different angles to improve the structural integrity of the riser.

27.

The method of claim 23 wherein at least one of the sheets is rolled into an elongate cylinder prior to insertion into the mold.

28.

The method of claim 27 wherein the cylinder is arranged for placement into the mold so that ends of the cylinder are located inboard of an outer surface of the riser.

29.

The method of claim 27 wherein the finished riser has a tension side and a compression side and the ends of the cylinder are not located along either the tension or compression sides of the riser.

30.

The method of claim 27 wherein the finished riser has a tension side and a compression side and the cylinder is positioned such that the cylinder is essentially continuous along both the tension and compression sides of the riser.